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Subject: APPEAL BRIEF UNDER 37 C.F.R. §41.37

Notes:

Attached hereto:

- 1) APPEAL BRIEF UNDER 37 C.F.R. §41.37 ( 30 pp.);
- 2) Form PTO-2038, Credit Card Payment Form (1 page).

Thank you,  
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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Steven Clay Moore

Serial No.: 10/607,291

Date Filed: June 27, 2003

Title: Turn Signal Indicating The  
Vehicle Is Turning

§ Group Art Unit: 2636

§

§ Examiner: Mehmood, Jennifer A.

§ Confirmation No.: 8734

§

§ Atty Docket No.: AMG.4017.PAT

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**APPEAL BRIEF UNDER 37 C.F.R. §41.37**Commissioner for Patents  
Alexandria, VA 22313-1450

Dear Sir:

This paper is submitted pursuant to 37 CFR §41.37 in furtherance of the Notice of Appeal filed on March 16, 2006 for the above referenced patent application to appeal final rejections imposed by the USPTO on claims in the above referenced patent application to the Board of Patent Appeals and Interferences ("Board") after careful consideration to address issues associated with the final rejections.

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## **I. REAL PARTY IN INTEREST**

The real party in interest is Steve C. Moore having a principle residence at 8211 Long Canyon Dr., Austin, Texas 78732, as sole inventor and owner of patent(s) resulting from the above-referenced patent application. No assignments have been executed or made of record as of the date of execution of this appeal brief.

## **II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals nor interferences known to Appellants, Appellants' legal representative, or assignee which will directly affect or be directly affected by or having a bearing on the Board's decision in this pending appeal.

## **III. STATUS OF CLAIMS**

Claims 1-40 are pending in this application. Independent claims 1, 11, 18, 20, 25, 28, 36, and 39 are appealed herein along with corresponding rejections of their respective dependent claims. Claims 1-40 stand rejected by a final Office action dated December 23, 2005. More particularly:

- 1) Claims 1 and 32 stand rejected under 35 USC § 102(b) as being anticipated by U.S. Pat. 5,966,073 (hereinafter "Walton").
- 2) Claims 6-7, 11-14, and 18 stand rejected under 35 USC § 102(b) as being anticipated by U.S. Pat. 5,673,019 (hereinafter "Dantoni").
- 3) Claim 2, 16, and 34-35 stand rejected under 35 USC § 103(a) as being unpatentable over Walton.
- 4) Claim 3 stands rejected under 35 USC § 103(a) as being unpatentable over Walton in view of U.S. Pat. 4,348,655 (hereinafter "Goertler").
- 5) Claims 4-5 and 17 stand rejected under 35 USC § 103(a) as being unpatentable over Walton in view of Dantoni.
- 6) Claims 2 and 39 stand rejected under 35 USC § 103(a) as being unpatentable over Dantoni.

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- 7) Claims 8-10, 15, 19-27, 36-38, and 40 stand rejected under 35 USC § 103(a) as being unpatentable over Dantoni in view of U.S. Pat. 4,638,295 (hereinafter "Middlebrook").
- 8) Claims 28-31 and 33 stand rejected under 35 USC § 103(a) as being unpatentable over Walton in view of Middlebrook.

#### IV. STATUS OF AMENDMENTS

In its Response to final Office Action Mailed December 23, 2005 that Appellants filed on February 23, 2006, Appellants requested that the claims 6, 8-9, 14, 16-18, 24, 32, and 36 be amended. The Advisory Action of March 8, 2006 rejected entry of the requested amendments as not being deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. No other amendments have been filed subsequent to the final rejection. The claims found in the Exhibit of this Appeal Brief reflect the appealed claims as they are understood by the Appellants at the date of this appeal.

#### V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellants' independent claim 1 as currently presented claims a system to sense when a turn signal for a vehicle is active and the vehicle is turning. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", first par., first and second sent.).<sup>1</sup> The system is designed to indicate that the vehicle is turning by varying a frequency and/or intensity with which the turn signal blinks, signaling to other motorists that the vehicle is turning. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", last par., first and second sent.). The frequency and/or intensity with which the turn signal blinks is varied based upon an amount of time during which the vehicle is turning. (*See, e.g.*, Specification, Abstract). For instance, one embodiment describes the analog adjustment of the frequency and amplitude with which the turn signal lamps are driven. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed

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<sup>1</sup> Note that "Specification" hereinafter refers to Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning").

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Description of the Invention”, last par., second sent.). Furthermore, another embodiment describes the control of pulse generators or other integrated circuits where the duty cycle and amplitude of the output signal is dependent upon analog voltage levels. (*See, e.g.*, Specification, pg. 3, sect. entitled “Detailed Description of the Invention”, second par., last sent.)

Appellants’ independent claim 6 as currently presented claims an apparatus to communicate a turn of a vehicle. The apparatus comprises a sensor to detect a position of a shaft of the vehicle; a control circuit to generate an output signal, wherein the output signal varies based upon the position of the shaft, and a turn signal lamp to produce a turn signal based upon the output signal. (*See, e.g.*, Specification, pg. 3, sect. entitled “Detailed Description of the Invention”, last par., first and second sent.). For instance, the specification describes implementation of a commercially available sensor to detect the position of the shaft as opposed to detection of angular displacement. (*See, e.g.*, Specification, pg. 3, sect. entitled “Detailed Description of the Invention”, first par., fourth and last sent.).

Appellants’ independent claim 11 as currently presented claims an apparatus to communicate a turn of a vehicle. The apparatus comprises a sensor to detect an angle of a wheel of the vehicle, a control circuit to generate an output signal, wherein the output signal varies based upon the angle of the wheel, and a turn signal lamp to produce a turn signal based upon the output signal. For instance, the specification describes implementation of resistive, capacitive, and inductive sensors to detect the angle of the wheels. (*See, e.g.*, Specification, pg. 3, sect. entitled “Detailed Description of the Invention”, first par., fourth and last sent.).

Appellants’ independent claim 14 as currently presented claims a vehicle comprising a shaft; a sensor to detect a position of a shaft; a control circuit to generate an output signal, wherein the output signal varies based upon the position of the shaft; and a turn signal lamp to produce a turn signal based upon the output signal. (*See, e.g.*, Specification, pg. 3, sect. entitled “Detailed Description of the Invention”, last par., first and second sent.). For instance, the specification describes implementation of a commercially available sensor to detect the position of the shaft as opposed to detection

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of angular displacement. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", first par., fourth and last sent.).

Appellants' independent claim 16 as currently presented claims a vehicle comprising a wheel to turn the vehicle; a sensor to indicate whether the vehicle is turning; a control circuit to determine a sensor signal indicative of an amount of time that the vehicle has been turning and to generate an output signal, wherein the output signal varies based upon the amount of time; and a turn signal lamp to produce a turn signal based upon the output signal while the vehicle is turning. (*See, e.g.*, Specification, pg. 4, sect. entitled "Detailed Description of the Invention", first full par., last sent.).

Appellants' independent claim 18 as currently presented claims a vehicle comprising a wheel; a sensor to detect an angle of the wheel; a control circuit to generate an output signal, wherein the output signal varies based upon the angle of the wheel; and a turn signal lamp to produce a turn signal based upon the output signal. For instance, the specification describes implementation of resistive, capacitive, and inductive sensors to detect the angle of the wheels. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", first par., fourth and last sent.).

Appellants' independent claim 20 as currently presented claims a method for communicating a turn of a vehicle. The method includes generating an output signal with a frequency that varies based upon a position of a shaft; and outputting a turn signal in response to application of the output signal to a turn signal lamp, wherein the turn signal flashes in relation to the frequency. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", last par., first and second sent.). Separately-rejected dependent claims 21, 23, and 24 add limitations for varying the intensity, duty cycle, and frequency of the turn signal with the output signal.

Appellants' independent claim 25 as currently presented claims a method for communicating a turn of a vehicle. The method includes generating an output signal based upon an angle of a wheel of the vehicle to communicate the turn; and applying the output signal to a turn signal lamp to vary a frequency with which the turn signal flashes based upon an angle of a wheel of the vehicle. For instance, the specification describes implementation of resistive, capacitive, and inductive sensors to detect the angle of the

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wheels. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", first par., fourth and last sent.). Separately-rejected dependent claim 27 adds a limitation for varying the duty cycle and amplitude of the turn signal with the output signal.

Appellants' independent claim 28 as currently presented claims a method for communicating a turn of a vehicle. The method includes generating an output signal to communicate the turn, wherein a frequency of the output signal varies based upon an amount of time the vehicle has been moving while the wheels are turned; and applying the output signal to a turn signal lamp to vary a frequency with which the turn signal flashes. (*See, e.g.*, Specification, pg. 4, sect. entitled "Detailed Description of the Invention", first full par., last sent.). Separately-rejected dependent claims 29 and 31 add limitations for varying the intensity and duty cycle and amplitude of the turn signal with the output signal.

Appellants' independent claim 32 as currently presented claims a method for communicating a turn of a vehicle. The method includes determining an amount of time the vehicle has been moving while the wheels are turned; varying an output signal based upon the amount of time; and applying the output signal to a turn signal lamp to vary an intensity of a turn signal for the vehicle. (*See, e.g.*, Specification, pg. 4, sect. entitled "Detailed Description of the Invention", first full par., last sent.). Separately-rejected dependent claims 33 and 34 add limitations for varying the frequency and duty cycle of the turn signal with the output signal.

Appellants' independent claim 36 as currently presented claims a method for communicating a turn of a vehicle. The method includes sensing an angle of a wheel of the vehicle while the vehicle is moving; generating an output signal based upon the angle; and applying the output signal to a turn signal lamp to vary an intensity of a turn signal based upon the angle. For instance, the specification describes implementation of resistive, capacitive, and inductive sensors to detect the angle of the wheels. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", first par., fourth and last sent.). Separately-rejected dependent claim 38 adds a limitation for varying the duty cycle and amplitude of the turn signal with the output signal.



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Appellants' independent claim 39 as currently presented claims a method for communicating a turn of a vehicle. The method includes sensing a position of a shaft of the vehicle; generating an output signal for the vehicle, wherein a wattage of the output signal varies based upon the position of the shaft; and applying the output signal to a turn signal lamp to vary an intensity of a turn signal generated by the turn signal lamp based upon the position. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", last par., first and second sent.). For instance, the specification describes implementation of a commercially available sensor to detect the position of the shaft as opposed to detection of angular displacement. (*See, e.g.*, Specification, pg. 3, sect. entitled "Detailed Description of the Invention", first par., fourth and last sent.). Separately-rejected dependent claim 40 adds a limitation for varying the duty cycle and amplitude of the turn signal with the output signal.

#### **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- 1) Claim 1 stands rejected under 35 USC § 102(b) as being anticipated by Walton.
- 2) Claims 11 and 18 stand rejected under 35 USC § 102(b) as being anticipated by Dantoni.
- 3) Claim 39 stands rejected under 35 USC § 103(a) as being unpatentable over Dantoni.
- 4) Claims 20, 25, and 36 stand rejected under 35 USC § 103(a) as being unpatentable over Dantoni in view of Middlebrook.
- 5) Claim 28 stands rejected under 35 USC § 103(a) as being unpatentable over Walton in view of Middlebrook.

#### **VII. ARGUMENT**

##### **(A) Claim rejections under 35 USC § 102(b)**

Claims 1, 6-7, 11-14, 18, and 32 stand rejected under 35 USC § 102(b) as being anticipated by Walton and Dantoni. Appellant respectfully suggests that the rejections should be reversed based upon the following remarks.

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A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference.<sup>2</sup> Furthermore, the identical invention must be shown in as complete detail as is contained in the claim.<sup>3</sup>

**1) Claim 1 stands rejected under 35 USC § 102(b) as being anticipated by Walton.**

With regards to independent claim 1, the final Office action dated December 23, 2005, fails to establish a prima facie case of anticipation by Walton because citations of Walton provided as support for the rejections fail to describe, suggest or teach “each and every element as set forth in the claim[s]”. In particular, claim 1 states:

A system to sense when a turn signal for a vehicle is active and the vehicle is turning and indicate that the vehicle is turning by **varying a frequency and/or intensity with which the turn signal blinks**, signaling to other motorists that the vehicle is turning, **wherein the frequency and/or intensity with which the turn signal blinks is varied based upon an amount of time during which the vehicle is turning.**<sup>4</sup>

As discussed in the final Office action<sup>5</sup>, Walton states:

...If desired, the turn light circuit can be configured with the turning of the vehicle so that the **turn light circuit activates the turn signals** when the vehicle enters a turn and continues for **some predetermined period of time**, such as, for example, two seconds.<sup>6</sup>

The final Office action<sup>7</sup> proceeds with an interpretation of this disclosure:

Walton discloses a system to sense when a turn signal for a vehicle is active and the vehicle is turning and indicates that the vehicle is turning by varying a frequency and/or intensity (**signal off – 0% intensity; signal on 100% intensity**) with which the turn signal blinks....<sup>8</sup>

<sup>2</sup> *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

<sup>3</sup> *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

<sup>4</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled “Turn Signal Indicating The Vehicle Is Turning”, claim 1;-(emphasis added).

<sup>5</sup> Final Office action dated December 23, 2005, pg. 4, sect. 5, last line, reference to Walton (col. 4, lines 50-64).

<sup>6</sup> Walton, U.S. Pat. 5,966,073, col. 4, lines 50-64; (emphasis added).

<sup>7</sup> Final Office action dated December 23, 2005, pg. 2, sect. 5.

<sup>8</sup> Id. At pp. 2-3, sect. 5; (emphasis added).

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Walton describes the option of activating the turn signals for a predetermined period of time. Activating a turn signal for a predetermined period of time does not "vary[] a frequency and/or intensity with which the turn signal blinks... based upon an amount of time during which the vehicle is turning". In particular, the interpretation set forth in the final Office action appears to suggest that the fact that the signal blinks anticipates "...varying the frequency and/or intensity with which the signal blinks...." Appellant suggests that this claim construction is inappropriate because it ignores the phrase "...with which the signal blinks...."

Appellant suggests that "...varying the frequency and/or intensity..." as described in the claim language should be construed to add meaning to the phrase "...with which the turn signal blinks...." In *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.* 520 U.S. 17, 41 USPQ2d 1865 (1997), the Supreme Court emphasized that "[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention. ...".<sup>9</sup>

As is well known in the art, the frequency of a turn signal is a function of the amount of time the turn signal lamp stays on plus the amount of time the turn signal lamp stays off. Walton deactivates the signal, which does not vary the frequency with which the turn signal blinks. Walton turns off the turn signal, which stops the turn signal lamp from blinking.

Furthermore, Walton does not vary the intensity with which the turn signal blinks. Because the phrase "varying the... intensity" modifies the phrase "with which the signal blinks", and the phrase "with which the signal blinks" describes that the on and off states of the turn signal (100% intensity and 0% intensity), "varying the intensity" should be construed to add meaning to the claim. Appellant suggests that the "intensity" of a lamp such as a turn signal lamp is well understood in the art as being related to the brightness. This meaning is even implicitly set forth in the interpretation of the claim in the final

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<sup>9</sup> *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17 at 29, 41 USPQ2d 1865 at 1871 (1997), on remand 114 F.3d 1161, 43 USPQ2d 1152 (Fed. Cir. 1997); Also see *E.g. Lemelson v. General Mills, Inc.*, 968 F.2d 1202, 23 USPQ2d 1284 (Fed. Cir. 1992), cert. denied, 506 U.S. 1053 (1993); *Crown Cork & Seal Co. Inc. v. Ethyl Corp.*, 11 USPQ2d 1577, 1581 (E.D. Va. 1989).

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Office action, i.e., "(signal off – 0% intensity; signal on 100% intensity)".<sup>10</sup> Thus, varying the intensity with which the turn signal blinks should be construed to comprise, for instance, varying the brightness at which the signal blinks rather than turning off the turn signal after a predetermined period of time, which stops the turn signal lamp from blinking. Thus, Appellant respectfully requests that the rejection of claim 1 be reversed.

Further, claims 2-5, being dependent upon claim 1, incorporate the limitations of claim 1. If the rejections of claim 1 are reversed, rejections of all dependent claims that are based upon anticipation of the limitations of claim 1 by Walton should also be reversed.<sup>11</sup> Appellant therefore respectfully requests that these rejections also be reversed.

**2) *Claims 11 and 18 stand rejected under 35 USC § 102(b) as being anticipated by Dantoni.***

With regards to independent claims 11 and 18, the final Office action<sup>12</sup> fails to establish a prima facie case of anticipation by Dantoni because citations of Dantoni provided as support for the rejections fail to describe, suggest or teach "each and every element as set forth in the claim[s]". In particular, claim 11 states:

An apparatus to communicate a turn of a vehicle, the apparatus comprising: a sensor to detect an angle of a wheel of the vehicle; a control circuit to generate an output signal, wherein the output signal varies based upon the angle of the wheel; and a turn signal lamp to produce a turn signal based upon the output signal.<sup>13</sup>

Similarly, claim 18 states:

A vehicle comprising: a wheel; a sensor to detect an angle of the wheel; a control circuit to generate an output signal, wherein the output signal varies based upon the angle of the wheel; and a turn signal lamp to produce a turn signal based upon the output signal.<sup>14</sup>

<sup>10</sup> Id. at pp. 2-3, sect. 5.

<sup>11</sup> See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

<sup>12</sup> Final Office action dated December 23, 2005.

<sup>13</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning", claim 11;-(emphasis added).

<sup>14</sup> Id. at claim 18;-(emphasis added).

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As described in the final Office action, Dantoni describes turning on one to three lamps based upon the position of the shaft.<sup>15</sup> In particular, as the shaft rotates, one to three microswitches are closed, turning on one to three lamps to indicate the degree of the turn.<sup>16</sup> However, unlike Dantoni, claims 11 and 18 describe "a control circuit to generate an output signal, wherein the output signal varies based upon the angle of the wheel". The specification of the subject application clearly distinguishes the detection of the position of the shaft from detection of the angle of the wheel by describing "...varying the frequency or intensity of the of the turn signal in proportion to the position of the shaft, angle of the wheels, or amount of time...".<sup>17</sup> Thus, Appellant respectfully requests that the rejection of claims 11 and 18 be reversed.

With regards to claims 12-13 and 19, Appellant submits that claims 12-13 and 19 incorporate the limitations of claims 11 and 18, respectively. So Appellant respectfully requests that the rejections of claims 12-13 be reversed to the extent the rejections rely upon Dantoni.

**(B) Claim rejections under 35 USC § 103(a)**

Claims 20, 25, 28, 36, and 39 stand rejected under 35 USC § 103(a) as being unpatentable by Dantoni, Dantoni in view of Middlebrook, and Walton in view of Middlebrook. Appellant respectfully suggests that the rejections are traversed in the following remarks.

To establish a prima facie case of obviousness, three basic criteria must be met.<sup>18</sup> First, there must be a suggestion or motivation to modify or combine the references.<sup>19</sup> Second, there must be a reasonable expectation of success in the modification or

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<sup>15</sup> Dantoni, U.S. Pat. 5,673,019 (col. 5, lines 32-40; Fig. 1A, item 266) and (col. 3, lines 55-67 thru col. 4, lines 1-4).

<sup>16</sup> Id.

<sup>17</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning", pg. 4, first full par., last sent.: "Similarly, the system can communicate to other motorists by varying the frequency or intensity of the turn signal in proportion to the position of the shaft, angle of the wheels, or amount of time the car has been turning."

<sup>18</sup> Manual of Patent Examining Procedure §2142.

<sup>19</sup> *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

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combination.<sup>20</sup> Finally, the modification or combination must teach or suggest all of Applicants' claim limitations.<sup>21</sup>

**3) Claim 39 stands rejected under 35 USC § 103(a) as being unpatentable over Dantoni.**

With regards to independent claim 39, the Office action fails to establish a prima facie case of obviousness by Dantoni because citations of Dantoni provided as support for the rejections fail to teach or suggest all of Appellant's claim limitations.<sup>22</sup> In particular, claim 39 states:

A method for communicating a turn of a vehicle, the method comprising: sensing a position of a shaft of the vehicle; generating an output signal for the vehicle, wherein a wattage of the output signal varies based upon the position of the shaft; and applying the output signal to a turn signal lamp to vary an intensity of a turn signal generated by the turn signal lamp based upon the position.<sup>23</sup>

The final Office action states:

...It would be obvious that a certain amount of work (measured as wattage) is accomplished as the position of the shaft is varied. The shaft sensor acknowledges a turning condition by recognizing that work (a turn) has been performed.<sup>24</sup>

As cited, Dantoni describes turning on one to three lamps based upon the position of the steering column as mechanical actuators at different positions on the steering column actuate microswitches.<sup>25</sup> The microswitches close circuits, each turning on a signal to a turn signal lamp.<sup>26</sup> The turn signal lamps are either on or off, depending upon whether the corresponding microswitch is mechanically actuated or not,<sup>27</sup> which does not vary "a wattage of the output signal" and apply "the output signal to a turn signal lamp to

<sup>20</sup> *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097, 231 USPQ 375, 379 (Fed. Cir. 1986).

<sup>21</sup> *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

<sup>22</sup> *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

<sup>23</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning", claim 39; (emphasis added).

<sup>24</sup> Final Office action dated December 23, 2005, pg. 2, sect. 5.

<sup>25</sup> Dantoni, U.S. Pat. 5,673,019 (col. 2, lines 27-42; and col. 4, lines 12-30).

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

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vary an intensity of a turn signal generated by the turn signal lamp based upon the position.” Thus, Appellant respectfully requests that the rejection of claim 39 be withdrawn and that claim 39 be allowed.

With regards to claim 40, Appellant submits that claim 40 incorporates the limitations of claim 39. So Appellant respectfully requests that the rejection of claim 40 under 35 USC § 103(a) be reversed.

**4) *Claims 20, 25, and 36 stand rejected under 35 USC § 103(a) as being unpatentable over Dantoni in view of Middlebrook.***

***(a) Claim 20***

With regards to independent claim 20, the final Office action fails to establish a prima facie case of obviousness by Dantoni in view of Middlebrook because citations of Dantoni and Middlebrook provided as support for the rejections fail to teach or suggest all of Appellants’ claim limitations.<sup>28</sup> In particular, claim 20 states:

A method for communicating a turn of a vehicle, the method comprising: generating an output signal with a frequency that varies based upon a position of a shaft; and outputting a turn signal in response to application of the output signal to a turn signal lamp, wherein the turn signal flashes in relation to the frequency.<sup>29</sup>

The final Office action states:

...In addition, it would have been obvious to vary frequency of turn signals in order to warn oncoming traffic that a turning vehicle has committed itself to the turn and that a turn movement is in process.<sup>30</sup>

As cited, Dantoni describes turning on one to three lamps based upon the position of the steering column as mechanical actuators at different positions on the steering column actuate microswitches.<sup>31</sup> The microswitches close circuits, each turning on a

<sup>28</sup> *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

<sup>29</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled “Turn Signal Indicating The Vehicle Is Turning”, claim 20;-(emphasis added).

<sup>30</sup> Final Office action dated December 23, 2005, pg. 9, sect. 21, second par., last sent.; (emphasis added).

<sup>31</sup> Dantoni, U.S. Pat. 5,673,019 (col. 2, lines 27-42; and col. 4, lines 12-30).

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signal to a turn signal lamp.<sup>32</sup> The turn signal lamps are either on or off, depending upon whether the corresponding microswitch is mechanically actuated or not.<sup>33</sup> The final Office action notes that Dantoni does not disclose varying a frequency of a turn signal but also points out that Middlebrook's disclosure describes switching the frequency of the turn signal from 80 flashes per minute to 200 flashes per minute and vice versa, coincident with vehicle movement.<sup>34</sup> More specifically, Middlebrook detects a commitment to turn by "the movement of the automobile or by the acceleration of the engine" and then increases the flash rate of the turn signal to warn oncoming traffic.<sup>35</sup> However, even when assuming that the teachings can be combined, the combination does not describe, teach, or suggest "a frequency that varies based upon a position of a shaft." Middlebrook increases the frequency in response to acceleration and Dantoni turns on more lamps in response to the degree of the turn of the steering column. Therefore, the combination of Dantoni and Middlebrook fails to achieve all of the elements of the claims.

The attempt to reconstruct Appellant's invention with the combination of Dantoni and Middlebrook requires the use of impermissible hindsight.<sup>36</sup> In particular, there is no suggestion in either Dantoni or Middlebrook to vary frequency in response to a position of the shaft. The requirements for a proper Section 103 rejection were recently and unambiguously re-stated by the U. S. Court of Appeals for the Federal Circuit in *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). The claims at issue in *Dembiczak* were directed towards an orange trash bag on which facial indicia such as eyes, nose, and mouth were affixed to simulate the appearance of a carved, decorative pumpkin when the bag was filled with leaves or other trash filling material. The Board of Patent Appeals and Interferences (the Board) affirmed the examiner's rejection of the claims under

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<sup>32</sup> Id.

<sup>33</sup> Id.

<sup>34</sup> Id. pg. 7, sect. 16, second par.: "For claim 8, Dantoni does not disclose varying a frequency of the turn signal, however, Middlebrook discloses this feature (col. 1, lns 7-14; col. 6, lns 40-55; col. 10, lns 17-20 and 48-63).

<sup>35</sup> Middlebrook (col. 2, lns 35-41 and 53-57).

<sup>36</sup> *In re McLaughlin*, 443 F.2d 1392, 170 U.S.P.Q. 209, 212 (CCPA 1971)[Obviousness rejection cannot be based only on knowledge gleaned from Appellants' disclosure.]; See also *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999).



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Section 103 based on a combination of references, one of which was conventional prior art trash bags and another of which was a children's art book describing a method of making a "paper bag pumpkin" by stuffing a bag with newspapers, painting it orange, and then painting on facial features with black paint. The Federal Circuit reversed the Board, reasoning that the Board had failed to make a showing of any suggestion, teaching, or motivation to combine the cited references.

In a strongly worded opinion, the Court wrote, "[o]ur case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."<sup>37</sup> The Court went on to say, "[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability."<sup>38</sup>

While the *Dembiczak* Court acknowledged that the required evidence of suggestion or motivation does not necessarily have to be found in the references themselves and may flow from the knowledge of one of ordinary skill in the art, the Court made clear that "the range of sources available [for demonstrating the requisite suggestion or motivation]... does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'"<sup>39</sup>

Appellant respectfully submits that the Office action has failed to establish a *prima facie* case of obviousness with respect to claim 20 because Dantoni fails to suggest or motivate the subject combination with Middlebrook. The Office action does not provide any indication of a teaching or motivation to combine Dantoni with Middlebrook. In rejecting the claims, the Office action did not particularly identify any suggestion, teaching, or motivation in the cited references to modify Dantoni to incorporate the teachings of Middlebrook and instead relied upon a general statement indicating that:

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<sup>37</sup> *Dembiczak*, 50 USPQ2d at 1617.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.* (citation omitted).

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... it would have been obvious to vary frequency of turn signals in order to warn oncoming traffic that a turning vehicle has committed itself to the turn and that a turn movement is in process.<sup>40</sup>

The Office action simply asserts that Dantoni and Middlebrook could be functionally combined without providing a single piece of evidence of any teaching or motivation to combine them in such a way. Such a broad and conclusory statement of the possibility of a combination cannot support a proper combination of Dantoni and Middlebrook without some suggestion or teaching. Appellant respectfully requests that the rejection of claim 20 be reversed.

With regards to claims 21-24, Appellant submits that claims 21-24 incorporate the limitations of claim 20. So Appellant respectfully requests that the rejections of claims 21-24 under 35 USC § 103(a) be reversed.

**(b) Claim 25**

With regards to independent claim 25, the Office action fails to establish a prima facie case of obviousness by Dantoni in view of Middlebrook because citations of Dantoni and Middlebrook provided as support for the rejections fail to teach or suggest all of Appellants' claim limitations.<sup>41</sup> In particular, claim 25 states:

A method for communicating a turn of a vehicle, the method comprising: generating a output signal based upon an angle of a wheel of the vehicle to communicate the turn; and applying the output signal to a turn signal lamp to vary a frequency with which the turn signal flashes based upon an angle of a wheel of the vehicle.<sup>42</sup>

The Office action states:

...interpreted and rejected for the same reasons as stated in the rejection of claims 11 and 20 as stated above regarding angle of wheel.<sup>43</sup>

<sup>40</sup> Final Office action dated December 23, 2005, pg. 7, sect. 16, second par., last sent; (emphasis added).

<sup>41</sup> *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

<sup>42</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning", claim 25;-(emphasis added).

<sup>43</sup> Final Office action dated December 23, 2005, pg. 10, sect. 22, first par. and pg. 7, sect. 16, second par.: "For claim 8, Dantoni does not disclose varying a frequency of the turn signal, however, Middlebrook discloses this feature (col. 1, lns 7-14; col. 6, lns 40-55; col. 10, lns 17-20 and 48-63); (emphasis added).

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As described in the final Office action Dantoni describes turning on one to three lamps based upon the position of the steering column as mechanical actuators at different positions on the steering column actuate microswitches.<sup>44</sup> The microswitches close circuits, each turning on a signal to a turn signal lamp.<sup>45</sup> The turn signal lamps are either on or off, depending upon whether the corresponding microswitch is mechanically actuated or not.<sup>46</sup> The final Office action notes that Dantoni does not disclose varying a frequency of a turn signal but also points out that Middlebrook's disclosure describes switching the frequency of the turn signal from 80 flashes per minute to 200 flashes per minute and vice versa, coincident with vehicle movement.<sup>47</sup> More specifically, Middlebrook detects a commitment to turn by "the movement of the automobile or by the acceleration of the engine" and then increases the flash rate of the turn signal to warn oncoming traffic.<sup>48</sup> However, even when assuming that the teachings can be combined, the combination does not describe, teach, or suggest "to vary a frequency with which the turn signal flashes based upon an angle of a wheel of the vehicle." Middlebrook increases the frequency in response to acceleration and Dantoni turns on more lamps in response to the degree of the turn of the steering column. Therefore, the combination of Dantoni and Middlebrook fails to achieve all of the elements of the claims.

Furthermore, the attempt to reconstruct Appellant's invention with the combination of Dantoni and Middlebrook requires the use of impermissible hindsight.<sup>49</sup> Appellant respectfully requests that the rejection of claim 25 be reversed.

With regards to claims 26-27, Appellant submits that claims 26-27 incorporate the limitations of claim 25. So Appellant respectfully requests that the rejections of claims 26-27 under 35 USC § 103(a) be reversed.

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<sup>44</sup> Dantoni, U.S. Pat. 5,673,019 (col. 2, lines 27-42; and col. 4, lines 12-30).

<sup>45</sup> Id.

<sup>46</sup> Id.

<sup>47</sup> Id. pg. 7, sect. 16, second par.: "For claim 8, Dantoni does not disclose varying a frequency of the turn signal, however, Middlebrook discloses this feature (col. 1, lns 7-14; col. 6, lns 40-55; col. 10, lns 17-20 and 48-63).

<sup>48</sup> Middlebrook (col. 2, lns 35-41 and 53-57).

<sup>49</sup> *In re McLaughlin*, 443 F.2d 1392, 170 U.S.P.Q. 209, 212 (CCPA 1971)[Obviousness rejection cannot be based only on knowledge gleaned from Appellants' disclosure.]; See also *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999).

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**(c) Claim 36**

With regards to independent claim 36, the Office action fails to establish a prima facie case of obviousness by Dantoni in view of Middlebrook because citations of Dantoni and Middlebrook provided as support for the rejections fail to teach or suggest all of Appellants' claim limitations.<sup>50</sup> In particular, amended claim 36 states:

A method for communicating a turn of a vehicle, the method comprising:  
**sensing an angle of a wheel of the vehicle while the vehicle is moving;**  
generating an output signal based upon the angle; and applying the output  
signal to a turn signal lamp to vary an intensity of a turn signal based  
**upon the angle.**<sup>51</sup>

The Office action states:

...interpreted and rejected for the same reasons as stated in the rejection  
of claims 11 and 20 as stated above regarding angle of wheel.<sup>52</sup>

As described in the final Office action Dantoni describes turning on one to three lamps based upon the position of the steering column as mechanical actuators at different positions on the steering column actuate microswitches.<sup>53</sup> The microswitches close circuits, each turning on a signal to a turn signal lamp.<sup>54</sup> The turn signal lamps are either on or off, depending upon whether the corresponding microswitch is mechanically actuated or not.<sup>55</sup> The final Office action notes that Dantoni does not disclose varying a frequency of a turn signal but also points out that Middlebrook's disclosure describes switching the frequency of the turn signal from 80 flashes per minute to 200 flashes per minute and vice versa, coincident with vehicle movement.<sup>56</sup> More specifically, Middlebrook detects a commitment to turn by "the movement of the automobile or by the

<sup>50</sup> *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

<sup>51</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning", claim 36; (emphasis added).

<sup>52</sup> Final Office action dated December 23, 2005, pg. 11, sect. 26, second par. and pg. 7, sect. 16, second par.: "For claim 8, Dantoni does not disclose varying a frequency of the turn signal, however, Middlebrook discloses this feature (col. 1, lns 7-14; col. 6, lns 40-55; col. 10, lns 17-20 and 48-63); (emphasis added).

<sup>53</sup> Dantoni, U.S. Pat. 5,673,019 (col. 2, lines 27-42; and col. 4, lines 12-30).

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> *Id.* pg. 7, sect. 16, second par.: "For claim 8, Dantoni does not disclose varying a frequency of the turn signal, however, Middlebrook discloses this feature (col. 1, lns 7-14; col. 6, lns 40-55; col. 10, lns 17-20 and 48-63).

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acceleration of the engine” and then increases the flash rate of the turn signal to warn oncoming traffic.<sup>57</sup> However, even when assuming that the teachings can be combined, the combination does not describe, teach, or suggest “to vary an intensity of a turn signal based upon the angle [of the wheel] of the vehicle.” Middlebrook increases the frequency in response to acceleration and Dantoni turns on more lamps in response to the degree of the turn of the steering column. Therefore, the combination of Dantoni and Middlebrook fails to achieve all of the elements of the claims.

Furthermore, the attempt to reconstruct Appellant’s invention with the combination of Dantoni and Middlebrook requires the use of impermissible hindsight.<sup>58</sup> Appellant respectfully requests that the rejection of amended claim 36 be withdrawn and that amended claim 36 be allowed.

With regards to claims 37-38, Appellant submits that claims 37-38 incorporate the limitations of amended claim 36. So Appellant respectfully requests that the rejections of claims 37-38 under 35 USC § 103(a) be reversed.

**5) *Claim 28 stands rejected under 35 USC § 103(a) as being unpatentable over Walton in view of Middlebrook.***

With regards to independent claim 28, the Office action fails to establish a prima facie case of obviousness by Walton in view of Middlebrook because citations of Walton and Middlebrook provided as support for the rejections fail to teach or suggest all of Appellants’ claim limitations.<sup>59</sup>

In particular, claim 28 states:

**A method for communicating a turn of a vehicle, the method comprising: generating an output signal to communicate the turn, wherein a frequency of the output signal varies based upon an amount of time the vehicle has been moving while the wheels are turned; and applying**

<sup>57</sup> Middlebrook (col. 2, lns 35-41 and 53-57).

<sup>58</sup> *In re McLaughlin*, 443 F.2d 1392, 170 U.S.P.Q. 209, 212 (CCPA 1971)[Obviousness rejection cannot be based only on knowledge gleaned from Appellants’ disclosure.]; See also *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999).

<sup>59</sup> *In re Royka*, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974).

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the output signal to a turn signal lamp to vary a frequency with which the turn signal flashes.<sup>60</sup>

The final Office action states:

...Walton does not disclose that the frequency is varied; however, Middlebrooke discloses this feature (col 2, lns 35-42). **It would be obvious to vary frequency of turn signals in order to warn oncoming traffic that a turning vehicle has committed itself to turn and that a turn movement is in process.**<sup>61</sup>

As cited, Walton describes the option of activating the turn signals for a predetermined period of time.<sup>62</sup> Middlebrook's disclosure describes switching the frequency of the turn signal from 80 flashes per minute to 200 flashes per minute and vice versa, coincident with vehicle movement.<sup>63</sup> Middlebrook detects a commitment to turn by "the movement of the automobile or by the acceleration of the engine" and then increases the flash rate of the turn signal to warn oncoming traffic.<sup>64</sup> Neither patent describes, teaches, or suggests "...a frequency of the output signal varies based upon an amount of time the vehicle has been moving while the wheels are turned...." Therefore, the combination of Walton and Middlebrook fails to achieve all of the elements of the claims. Appellant respectfully requests that the rejection of claim 28 be withdrawn and that claim 28 be allowed.

Furthermore, the combination of Walton and Middlebrook requires the use of impermissible hindsight<sup>65</sup> to attempt to reconstruct Appellant's invention. As discussed earlier, the requirements for a proper Section 103 rejection were recently and unambiguously re-stated by the U. S. Court of Appeals for the Federal Circuit in *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999). In a strongly worded opinion, the Court

<sup>60</sup> Application no. 10/607,291 filed June 27, 2003, for inventor Steve Clay Moore, entitled "Turn Signal Indicating The Vehicle Is Turning", claim 28;-(emphasis added).

<sup>61</sup> Final Office action dated December 23, 2005, pg. 10, sect. 23, second par.;(emphasis added).

<sup>62</sup> Walton, U.S. Pat. 5,966,073, col. 4, lines 50-64.

<sup>63</sup> Final Office action dated December 23, 2005, pg. 7, sect. 16, second par.: "For claim 8, Dantoni does not disclose varying a frequency of the turn signal, however, Middlebrook discloses this feature (col. 1, lns 7-14; col. 6, lns 40-55; col. 10, lns 17-20 and 48-63); Also note that the rejection of claim 20 is based upon the rejection of claim 8.

<sup>64</sup> Middlebrook (col. 2, lns 35-41 and 53-57).

<sup>65</sup> *In re McLaughlin*, 443 F.2d 1392, 170 U.S.P.Q. 209, 212 (CCPA 1971)[Obviousness rejection cannot be based only on knowledge gleaned from Appellants' disclosure.]

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wrote, "[o]ur case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."<sup>66</sup> The showing must be clear and particular. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'"<sup>67</sup>

Appellant respectfully submits that the Office action has failed to establish a *prima facie* case of obviousness with respect to claim 28 because Walton fails to suggest or motivate the combination with Middlebrook. The Office action does not provide any indication of a teaching or motivation to combine Walton with Middlebrook. In rejecting the claims, the Office action did not particularly identify any suggestion, teaching, or motivation in the cited references and instead relied upon a general statement indicating that:

**... It would be obvious to vary frequency of turn signals in order to warn oncoming traffic that a turning vehicle has committed itself to turn and that a turn movement is in process.**<sup>68</sup>

The Office action simply asserts that Walton and Middlebrook could be functionally combined without providing a single piece of evidence of any teaching or motivation to do so. Such a broad and conclusory statement of the possibility of a combination cannot support a proper combination of Walton and Middlebrook without some suggestion or teaching.

With regards to claims 29-31, Appellant submits that claims 29-31 incorporate the limitations of claim 28. So Appellant respectfully requests that the rejections of claims 29-31 under 35 USC § 103(a) be reversed.

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<sup>66</sup> *Dembiczak*, 50 USPQ2d at 1617.

<sup>67</sup> *Id.* (citation omitted).

<sup>68</sup> Final Office action dated December 23, 2005, pg. 10, sect. 23, second par.

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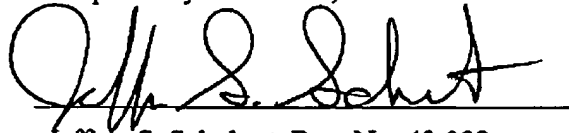
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**Conclusion**

In the present response, Appellant responded to the Office actions claim rejections under 35 USC §§ 102 and 103 for independent claims 1, 11, 18, 20, 25, 28, 36, and 39. In light of the remarks, Appellant believes that the rejections of these claims, as well as the corresponding rejections of their dependent claims, should be reversed. Accordingly, Applicant requests that rejections be withdrawn and application advance toward issuance.

May 16, 2006  
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Respectfully Submitted,



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## VIII. CLAIMS APPENDIX

### TEXT OF CLAIMS PRESENTED ON APPEAL

#### WHAT IS CLAIMED IS:

1. A system to sense when a turn signal for a vehicle is active and the vehicle is turning and indicate that the vehicle is turning by varying a frequency and/or intensity with which the turn signal blinks, signaling to other motorists that the vehicle is turning, wherein the frequency and/or intensity with which the turn signal blinks is varied based  
5 upon an amount of time during which the vehicle is turning.
2. The system as described in claim 1 further comprising a microcontroller, or microcontrollers, to take switching and sensory inputs and output a pulsing sequence to a circuit of the microcontroller, or microcontrollers, that drives turn signal lamps when the  
10 vehicle is turning.
3. The system as described in claim 1 further comprising pulse generators, or other circuits where a duty cycle and an amplitude of the turn signal is dependent upon analog voltage levels, to output a pulsing sequence to a circuit that drives the turn signal lamps  
15 when the vehicle is turning.
4. The system as described in claim 1 further comprising a shaft position sensor, or other resistive, capacitive or inductive sensor, to determine an amount to alter the frequency or intensity of the turn signal.  
20
5. The system as described in claim 1, wherein the system is adapted to adjust the turn signal frequency and/or intensity proportionally to a position of a shaft and/or the amount of time.  
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6. An apparatus to communicate a turn of a vehicle, the apparatus comprising:  
a sensor to detect a position of a shaft of the vehicle;  
a control circuit to generate an output signal, wherein the output signal varies  
based upon the position of the shaft; and  
5 a turn signal lamp to produce a turn signal based upon the output signal.
7. The apparatus of claim 6, further comprising a switch to activate the control  
circuit to indicate the turn upon activation of the switch.
8. The apparatus of claim 6, wherein the control circuit is adapted to vary a wattage  
to vary a frequency of the turn signal.
- 10 9. The apparatus of claim 6, wherein the control circuit is adapted to vary a wattage  
of the output signal to vary an intensity of the turn signal.
10. The apparatus of claim 6, wherein the control circuit comprises a pulse generator  
to vary a duty cycle of the output signal.
11. An apparatus to communicate a turn of a vehicle, the apparatus comprising:  
15 a sensor to detect an angle of a wheel of the vehicle;  
a control circuit to generate an output signal, wherein the output signal varies  
based upon the angle of the wheel; and  
a turn signal lamp to produce a turn signal based upon the output signal.
12. The apparatus of claim 11, further comprising a switch to indicate the turn upon  
20 activation of the switch by a driver.
13. The apparatus of claim 11, wherein the control circuit comprises a microcontroller  
to drive the turn signal lamp.
14. A vehicle comprising:  
a shaft;  
25 a sensor to detect a position of a shaft;

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a control circuit to generate an output signal, wherein the output signal varies  
based upon the position of the shaft; and  
a turn signal lamp to produce a turn signal based upon the output signal.

5 15. The vehicle of claim 14, wherein the control circuit comprises a pulse generator to  
vary a duty cycle of the output signal.

10 16. A vehicle comprising:  
a wheel to turn the vehicle;  
a sensor to indicate whether the vehicle is turning;  
a control circuit to determine a sensor signal indicative of an amount of time that  
the vehicle has been turning and to generate an output signal, wherein the  
output signal varies based upon the amount of time; and  
a turn signal lamp to produce a turn signal based upon the output signal while the  
vehicle is turning.

15 17. The vehicle of claim 16, wherein the sensor comprises a shaft position sensor to  
determine an amount to alter the frequency or intensity of the turn signal based  
upon a rotational displacement of a shaft.

20 18. A vehicle comprising:  
a wheel;  
a sensor to detect an angle of the wheel;  
a control circuit to generate an output signal, wherein the output signal varies  
based upon the angle of the wheel; and  
a turn signal lamp to produce a turn signal based upon the output signal.

25 19. The vehicle of claim 18, wherein the control circuit comprises a microcontroller  
generate a pulsing sequence to drive the turn signal lamp while the vehicle is  
turning.

20. A method for communicating a turn of a vehicle, the method comprising:

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generating an output signal with a frequency that varies based upon a position of a shaft; and

outputting a turn signal in response to application of the output signal to a turn signal lamp, wherein the turn signal flashes in relation to the frequency.

- 5     21.     The method of claim 20, wherein generating then output signal comprises varying an intensity of the turn signal.
22.     The method of claim 20, wherein generating the output signal comprises varying a current to drive a thermal flasher for the turn signal.
23.     The method of claim 20, wherein generating the output signal comprises varying  
10     a duty cycle of the turn signal.
24.     The method of claim 20, wherein generating the output signal comprises varying the frequency based upon a rotational displacement between a previous position and the position of the shaft.
25.     A method for communicating a turn of a vehicle, the method comprising:  
15     generating a output signal based upon an angle of a wheel of the vehicle to communicate the turn; and  
applying the output signal to a turn signal lamp to vary a frequency with which the turn signal flashes based upon an angle of a wheel of the vehicle.
26.     The method of claim 25, wherein generating the output signal comprises varying  
20     a wattage applied to a blinker for the turn signal.
27.     The method of claim 25, wherein generating the output signal comprises varying a duty cycle and amplitude of the output signal.
28.     A method for communicating a turn of a vehicle, the method comprising:

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generating an output signal to communicate the turn, wherein a frequency of the  
output signal varies based upon an amount of time the vehicle has been  
moving while the wheels are turned; and  
applying the output signal to a turn signal lamp to vary a frequency with which  
the turn signal flashes.

29. The method of claim 28, wherein generating the output signal comprises varying an intensity of the turn signal.
30. The method of claim 28, wherein varying the intensity comprises varying a wattage applied to a blinker for the turn signal.
- 10 31. The method of claim 28, wherein varying the intensity comprises varying a duty cycle and amplitude of the turn signal.
32. A method for communicating a turn of a vehicle, the method comprising:  
determining an amount of time the vehicle has been moving while the wheels are  
turned;  
15 varying an output signal based upon the amount of time; and  
applying the output signal to a turn signal lamp to vary an intensity of a turn  
signal for the vehicle.
33. The method of claim 32, wherein varying the output signal comprises varying a frequency of the turn signal.
- 20 34. The method of claim 32, wherein varying the output signal comprises varying a duty cycle of the output signal to vary the intensity of the turn signal.
35. The method of claim 32, wherein applying the output signal comprises applying a varying wattage to a blinker for the turn signal.
- 25 36. A method for communicating a turn of a vehicle, the method comprising:  
sensing an angle of a wheel of the vehicle while the vehicle is moving;

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generating an output signal based upon the angle; and  
applying the output signal to a turn signal lamp to vary an intensity of a turn  
signal based upon the angle.

37. The method of claim 36, wherein applying the output signal comprises varying a  
5 wattage applied to the turn signal lamp.
38. The method of claim 36, wherein applying the output signal comprises varying a  
duty cycle and amplitude of the turn signal.
39. A method for communicating a turn of a vehicle, the method comprising:  
sensing a position of a shaft of the vehicle;  
10 generating an output signal for the vehicle, wherein a wattage of the output signal  
varies based upon the position of the shaft; and  
applying the output signal to a turn signal lamp to vary an intensity of a turn  
signal generated by the turn signal lamp based upon the position.
40. The method of claim 39, wherein generating the output signal comprises varying  
15 a duty cycle and amplitude of the output signal.

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**IX. EVIDENCE APPENDIX**

Not applicable.

**X. RELATED PROCEEDINGS APPENDIX**

5

Not applicable.